

Science of the Season: Engineer An Igloo

Materials

- Marshmallows
- Toothpicks
- A sprinkle of creative engineering!



Instructions

What is an Igloo?

- Start off by having a conversation about igloos. What do they look like? How are they built? You can even watch [this video](#) to learn about an Inuit igloo.

Sketch Your Design

- Work through following steps of the engineering design process to create a marshmallow igloo:
 - Plan: Draw a picture of the igloo you plan to create
 - Create: Build the igloo
 - Improve: Redesign to fix any weaknesses or things that could be improved upon even more in your igloo
 - Note: If you struggle to get the igloo to stay standing, try using shapes such as triangles or hexagons

Did You Know...

Igloos are small houses made from snow. They are built by using blocks of snow and stacking them in a spiral pattern until closing off at the top to create a strong dome structure. They were used in winter as temporary shelters for Inuit people when they were away from their regular homes. Snow is used because the air pockets trapped in it make it an insulator. On the outside, temperatures may be as low as -49°F , but on the inside the temperature may range from 19°F to 61°F when warmed by body heat alone.

There are three traditional types of igloos, all of different sizes and used for different purposes.

- The smallest were constructed as temporary shelters, usually only used for one or two nights. These were built and used during hunting trips, often on open sea ice.
- Intermediate-sized igloos were for semi-permanent, family dwelling. This was usually a single room dwelling that housed one or two families. Often there were several of these in a small area, which formed an Inuit village.
- The largest igloos were normally built in groups of two. One of the buildings was a temporary structure built for special occasions, the other built nearby for living. These might have had up to five rooms and housed up to 20 people. A large igloo might have been constructed from several smaller igloos attached by their tunnels, giving common access to the outside. These were used to hold community feasts and traditional dances.